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Technology Governance Board

Service-Oriented Architecture Description

1. What is an enterprise architecture (EA)?

Enterprise architecture (EA) is generally defined as a series of related architectures for business, application/software, technology/infrastructure and information. An architecture is the high-level definition of the structure of a system, which is comprised of parts, their interrelationships, and externally visible properties.

EA is more than a collection of related architectures. The interrelationships among these architectures, and their joint properties, are essential to the EA. That is, these architectures should not be approached in isolation. Together, they are intended to address enterprise-wide concerns, such as:

- Meeting stakeholder needs
- Aligning IT with the business
- Seamless integration and data sharing
- Security and dependability
- Data integrity, consistency
- Reducing duplication

Treating the enterprise as a system, means taking the interactions among the constituent architectures into account. Breaking a system into parts will make the task less overwhelmingly complex, allowing specialists to focus on the parts and make progress.

2. What is a service-oriented architecture (SOA)?

A service-oriented architecture is essentially a collection of services. These services communicate with each other. The communication can involve either simple data passing or it could involve two or more services coordinating some activity. Some means of connecting services to each other is needed.

3. What does the State of Iowa mean by a service-oriented architecture (SOA)?

Using some EA and SOA elements, Iowa's Executive Branch will develop a service-oriented architecture for agencies to exchange data in an established fashion. Iowa will not be developing an entire EA at this time. Iowa's SOA may also be viewed as a key component or first step in developing an EA.

4. Why not develop an EA at this time?

As the development of an EA is a monumental task and a project that may take several years to develop, a service-oriented architecture appears to enable an easier

exchange of data while allowing agencies to retain the substantial investments in their current infrastructures. An SOA can also be developed in a much shorter time frame than the development of a complete EA.

5. What are the steps in determining Iowa's SOA?

- Determine the metadata model to be used
- Identify the data that can be shared and the lawful custodians of the data
- Define the publish and subscribe environment of the data-sharing web service

6. Who will gather the information associated with the SOA?

An outside consultant will be obtained through an RFP process with funds from the TGB budget. This consultant will gather information to be used in developing the following concepts for the TGB:

- Service-oriented architecture
- Enterprise portfolio management system

7. What information for Iowa's SOA will be gathered by the consultant?

The consultant will need to collect the data that can be shared and the rules associated with sharing that data. Some information can be shared with the public, some information can only be shared by selected agencies and some information must remain solely in the possession of the agency and cannot be shared. Sharing information between groups is governed by rules and regulations from many sources.

8. What groups exist that can be used to help with the development of Iowa's SOA?

The Joint Council of Chief Information Officers (JCIO) has formed projects for developing both an enterprise architecture and enterprise portfolio management system. These groups will be needed to determine the items to be collected from the agencies by the consultant.

9. When is the SOA needed?

As the TGB will be reviewing IT-related RFPs beginning in January 2006, the SOA will need to have a preliminary design by December 15, 2005. This newly designed SOA will be used by the TGB to evaluate data sharing concepts of the RFPs under review.

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Diagram of Key Elements

